

METHOD OF ELECTRICALLY CONNECTING SEMICONDUCTOR CHIP TO
SOLDER BALLS ON BALL GRID ARRAY PACKAGE

ABSTRACT OF THE DISCLOSURE

5 A method for electrically connecting a semiconductor chip to solder balls on a BGA
(Ball Grid Array) package is proposed. The proposed method is characterized by the use of
an electrically-conductive bridge to span in an overhead manner across a continuous elec-
trically-conductive trace that is interposed between a corresponding pair of bond finger and
via. The electrically-conductive bridge can be either a gold wire bonded through existing
wire-bonding process, or a zero-resistance chip resistor bonded through existing sur-
10 face-mount technology (SMT). Conventionally, the interposing trace can be bypassed by
using a multi-layer substrate. By the proposed method, however, it can be implemented on
existing single-layer substrate without having to use multi-layer substrate, and which can be
implemented by using existing technology, such as wire-bonding technology or sur-
face-mounting technology, without having to employ more expensive and advanced tech-
15 nologies.

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